

REPORT BY THE

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Comptroller General

OF THE UNITED STATES

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The Coast Guard's Programs Of Aids To Navigation Along Louisiana's Coast Could Be More Effective

The Coast Guard's aids to navigation program along Louisiana's coastline could be more effective if the Coast Guard would:

- Properly evaluate proposed changes to the aids and determine the need for additional aids.
- Periodically inspect aids for suitability.
- More effectively seek mariners' opinions on navigation problems.

The Coast Guard could respond faster to problems with navigation aids if it would establish priorities and repair aids according to their importance to safe marine transportation, identify the most appropriate homeports for tenders, and explore the use of private contractors.

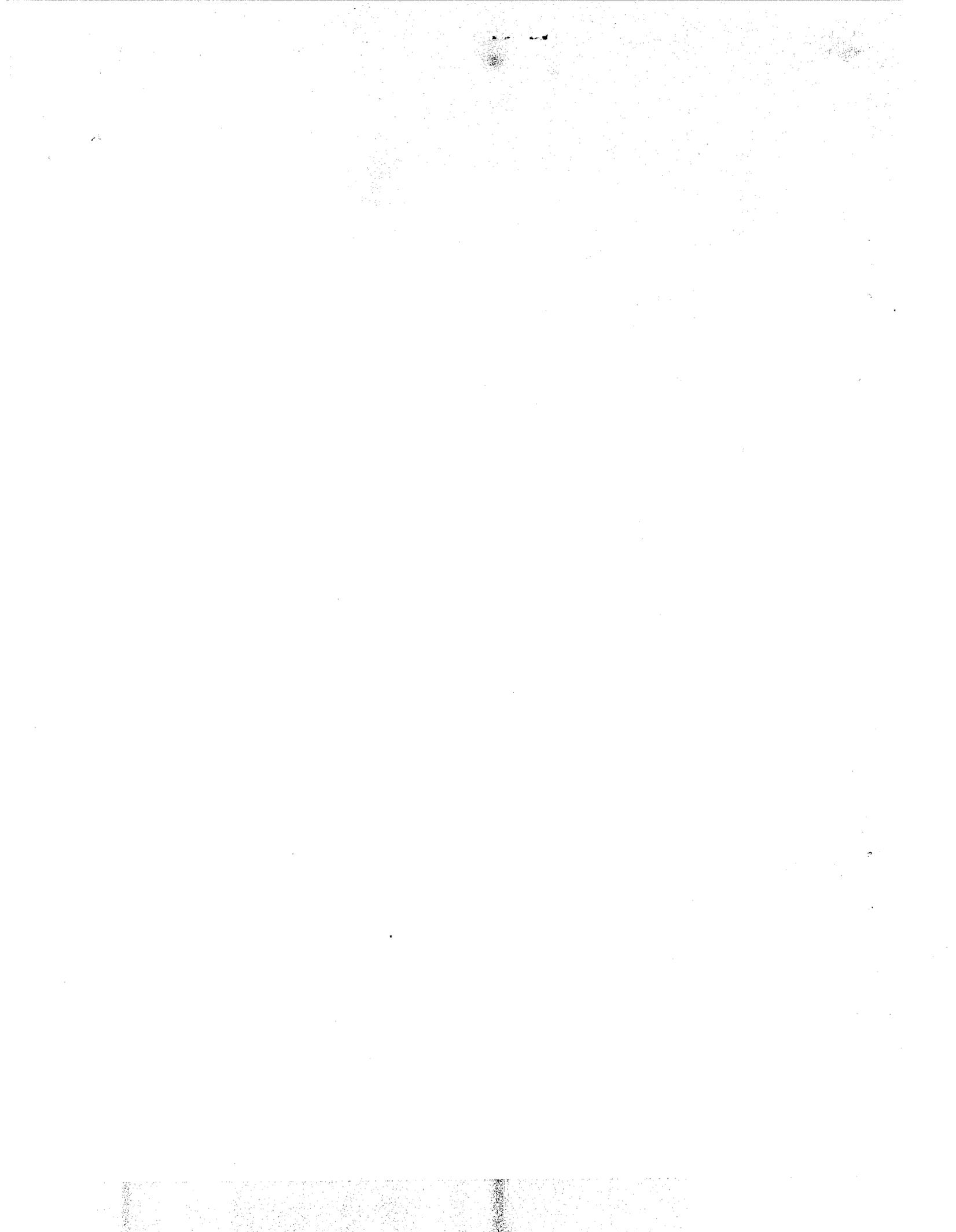


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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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✓ Senator Russell B. Long, United States Senate
✓ Senator J. Bennett Johnston, United States Senate
Congressman John Breaux, House of Representatives
✓ Congresswoman Lindy Boggs, House of Representatives
Congressman Robert Livingston, House of Representatives

As requested in your joint letter of February 9, 1979, we have evaluated Coast Guard's management of its aids to navigation program in southern Louisiana.

As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report for 30 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours

Lucas B. Stebbins

Comptroller General
of the United States

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COMPTROLLER GENERAL'S
REPORT TO THE LOUISIANA
CONGRESSIONAL DELEGATION

COAST GUARD'S PROGRAM
OF AIDS TO NAVIGATION
ALONG LOUISIANA COAST
COULD BE MORE EFFECTIVE

D I G E S T

The Coast Guard's 8th district's extensive system of aids to navigation along Louisiana's coastline is not as effective as it could be. Improvements are needed in the program's management. The Louisiana Congressional Delegation asked GAO to evaluate the effectiveness of the program.

IMPROVEMENTS NEEDED IN
AIDS MANAGEMENT

GAO found that the Coast Guard does not perform (1) detailed evaluations of proposed changes in navigation aids or (2) required inspections of the aids. Nor does the Coast Guard seek the opinions of mariners on navigation problems. (See pp. 3, 5, and 6.)

Detailed evaluations of aids changes

Without a detailed evaluation of proposed changes to navigation aids or the need for new aids, the propriety of Coast Guard action on such proposals cannot be determined. For example, the Coast Guard denied a request from mariners to place aids in a waterway where privately owned aids were being removed. GAO could not determine the propriety of the Coast Guard action because a detailed evaluation had not been prepared on the request. Mariners using the waterway continue to cite the need for aids in the waterway and stated that vessels have run aground because of the lack of aids. (See p. 4.)

Required inspections of
navigation aids

The Coast Guard does not perform all inspections of aids as required by its regulations, but instead relies extensively on

mariners' reports about problems with aids (aids out of place, malfunctions, or structural deficiencies). Mariners report problems only after they occur; periodic Coast Guard inspections could help prevent problems. (See p. 5.)

Communications with mariners on navigation problems

The Coast Guard has not established a formal system for communicating with mariners. Its regulations recognize the value of contributions from the maritime community and require cooperation with maritime associations, ship operators, and individuals. The regulations also require input from local pilot associations.

The Coast Guard relies heavily on informal meetings and contacts with mariners to discuss specific problems. Its weekly newsletter "Local Notice to Mariners" is the primary means of providing information on navigation aids and soliciting comments on proposed changes. However, the newsletter is not mailed to many mariners and often does not solicit comments on proposed aids changes or needs. (See p. 6.)

Many mariners believe a formal program to discuss navigation problems is needed. It would promote mutual cooperation and also ensure that the Coast Guard solicits and considers mariners' opinions and comments and adequately explains district actions on changes to navigation aids to interested parties. (See p. 9.)

Recommendations

The Secretary of Transportation should direct the Commandant of the Coast Guard to require the 8th district to:

- Conduct detailed evaluations of proposed changes to navigation aids, considering such factors as waterway use, vessel operations, and the environment.
- Periodically inspect aids to navigation as required by Coast Guard regulations.

--Establish a formal communication program on navigation problems with mariners. (See p. 11.)

OPPORTUNITIES FOR MORE
EFFECTIVE USE OF RESOURCES

The Coast Guard does not quickly correct discrepancies to navigational aids, such as buoys in the wrong place and structural deficiencies. Such discrepancies need to be corrected as soon as possible to minimize risks to mariners and the risk of claims from resulting accidents. (See p. 13.)

GAO examined 207 reported aid problems in southern Louisiana from January 3, 1979, to July 25, 1979. As of August 8, 1979, 27 problems, which were from 12 to more than 100 days old, had not been corrected. About half of the 180 problems which had been corrected took 6 to 30 days to repair and about 25 required 30 to 100 days to repair. (See p. 14.)

Delays in correcting discrepancies occur because the Coast Guard's 8th district

--has not categorized its aids as to their importance to safe marine transportation,

--has a limited number of tenders for maintaining aids and has not recently evaluated the appropriateness of the homeports of the tenders (see p. 15.), and

--has not explored the use of private contractors, particularly for extraordinary losses and damages resulting from catastrophic events such as hurricanes.

Part of the problem is that not all aids have the same significance to safe marine transportation and since they are not categorized according to significance, operating units have not been given sufficient guidance to know which aids require immediate attention. (See p. 15.) Aids which should be quickly corrected because of their use--marking hazardous areas, for example--are not assigned priorities.

Recommendations

The Secretary of Transportation should direct the Commandant of the Coast Guard to require the 8th district to:

- Rank aids to navigation according to their importance to safe marine transportation.
- Evaluate the appropriateness of its tenders' homeports.
- Explore the feasibility of using contractors to correct discrepancies when district units cannot respond in a reasonable period of time.

AGENCY COMMENTS

With the exception of the recommendations on required inspections and tender homeports, the Department concurred with GAO's findings and has instituted actions responsive to GAO's proposals. (See pp. 18 and 19.)

In commenting on the significance of inspections, the Department said that GAO's finding is incomplete and inaccurate. It stated that supervisory inspections are required as overviews of field inspections, but acknowledged that these inspections are not being performed. GAO believes that these inspections are needed to insure the quality of work performed. (See p. 11.)

With respect to tender homeports, the Department said the Coast Guard has chosen suitable locations. GAO believes the Coast Guard should make a current analysis of tender homeports because the homeports were selected many years ago and maritime activities in southern Louisiana have changed significantly. (See p. 18.)

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ABBREVIATIONS

ANT aids to navigation team

GAO General Accounting Office

CHAPTER 1

INTRODUCTION

In a February 9, 1979, letter, the Louisiana Congressional Delegation requested that we evaluate the management of the Coast Guard's aids to navigation program along Louisiana's Gulf Coast. As a result, we

- analyzed the Coast Guard's procedures and capabilities for establishing, reassessing, and maintaining aids to navigation and
- appraised the adequacy of the aids system and determined actions needed to correct any inadequacies.

We also (1) reviewed the Coast Guard's procedures for receiving and considering input from users of aids to navigation regarding their problems and needs and (2) discussed the consolidation of depot operations with Coast Guard officials.

BACKGROUND

Aids to navigation exist to provide safe transport and efficient vessel movement through a waterway. An aid can be as simple as willow wands stuck in the bottom along the edge of a channel or as sophisticated as a vessel traffic service system employing radar, closed-circuit television, and computers. Aids also include buoys (the most common aid), beacons, lighthouses, and lightships. There are currently over 1,300 aids in southern Louisiana.

The Louisiana Gulf Coast offers endless miles of navigatable waterways which are used by all sectors of the boating industry. From the Mississippi River to the small bayou, vessels of all types (ocean-going freighters and tankers, tugs, towboats, and commercial fishing and pleasure boats) ply these waters. The safe passage through these waterways is promoted through the extensive use of aids to navigation. The importance of these aids, principally buoys, day markers, beacons, and range lights, grows each year with the steady increase in marine vessel traffic.

Since 1939, the Coast Guard has been establishing, servicing, and maintaining aids in all navigatable waters in the United States. The Coast Guard's aids to navigation program in southern Louisiana is managed by its 8th district, headquartered in New Orleans, Louisiana. This district has numerous aids to navigation facilities throughout the Gulf

Coast area which are responsible for establishing and maintaining the aids. In carrying out these responsibilities, the 8th district employs:

- 4 construction tenders, used to build new aids structures and repair damaged pilings.
- 3 buoy tenders, used to service buoys.
- 10 buoy boats ,17 to 65 feet long, used to maintain aids. (See app. I.)

The buoy boats are used by aids to navigation teams (ANTs), which are strategically located throughout southern Louisiana. In addition to their normal maintenance responsibilities, ANTs, with their high-speed boats, are capable of rapidly responding to most operational problems (discrepancies). ANTs do not make structural repairs to stationary aids nor correct some discrepancies of the larger buoys--these are the responsibilities of the tenders.

SCOPE OF REVIEW

We reviewed the Coast Guard's aids to navigation program at the headquarters in Washington, D.C.; the 8th district in New Orleans, Louisiana; and district facilities in New Orleans, Louisiana; Berwick, Louisiana; Dulac, Louisiana; Venice, Louisiana; Galveston, Texas; Sabine, Texas; and Mobile, Alabama.

As agreed to by the requestors, we analyzed the time the Coast Guard took to respond to discrepancies. We reviewed Coast Guard records and regulations. We interviewed mariners who use the waterways in southern Louisiana and representatives of mariner associations to (1) obtain their views regarding the effectiveness of the Coast Guard's aids program, (2) identify problems being experienced, and (3) determine how the Coast Guard responds to mariners' recommendations regarding aids. After discussions with the requestors, it was agreed that we would not examine the Coast Guard's need for additional resources in Louisiana.

We also used data and analyses developed in our report entitled "Coast Guard Action Needed to Promote Safer Marine Transportation" (CED-79-37, dated May 21, 1979). This report included recommendations for ways the Coast Guard could improve its aids to navigation program and was performed at four Coast Guard districts, including the 8th district.

CHAPTER 2

DISTRICT MANAGEMENT OF THE AIDS TO NAVIGATION PROGRAM SHOULD BE IMPROVED

Although the district has a comprehensive program for establishing new aids and periodically reassessing the aids program, closer compliance to program requirements is needed. The district needs to improve its program management by

- preparing detailed evaluations for the approval or disapproval of proposed changes in aids;
- periodically inspecting aids; and
- establishing a formal system of communication with mariners to seek opinions regarding navigation problems.

THE DISTRICT NEEDS TO EVALUATE AIDS

Coast Guard regulations 1/ provide that the need for aids must be justified through a comprehensive initial analysis, and periodic reevaluations, of various factors, such as

- the characteristics of the users,
- the types of operations engaged in by the users, and
- the environment in which the users will operate.

This analysis is designed to ensure that all aspects relating to aids are thoroughly investigated.

In addition, the regulations require that benefits expected from proposed changes be identified and, where possible, quantified. Evaluation of these benefits must consider the number and size of vessels going through the area, the

1/Regulations as referred to in this report are Coast Guard internal management guidance and are contained in internal Coast Guard documents.

nature and value of the cargo, and the permanence of the traffic. The regulations recognize that if the analyses show a need for aids and the public can benefit, the Coast Guard has an obligation to provide them. This requirement applies to both the justification for individual aids and a group of individual aids or aids systems.

We reviewed district records on about 170 aids and aids systems approved or disapproved by the Coast Guard from fiscal year 1977 through March 1979. We were unable to determine from the records if the required analyses were prepared. In most cases the Coast Guard responded in writing to the mariners' proposals. But records again did not disclose any analyses of the reasons for the decisions reached.

The Chief of the District Aids to Navigation Branch told us that the branch's procedures for evaluating proposals for aid changes were informal and evaluations were not prepared. The following example typifies the need for a detailed evaluation of a request for aids by mariners.

As early as February 1976, interested parties in the Houma, Louisiana, area requested the Coast Guard district to place buoys in a waterway reaching from the Houma Navigation Canal to the Havoline Canal, crossing Terrebonne Bay and Timbalier Bay, a distance of about 20 miles. This request was made because privately owned aids marking the waterway were being removed by the owner of the aids who was discontinuing operations in the area. The request indicated that this waterway was used by a large volume of marine traffic and the need for aids between the two canals would continue to exist.

The request was denied by the district on the basis that the waterway was an unstable channel with a depth of approximately 6 feet, maintained only by the movement of vessels. It was the district's belief that this channel would soon fill-in when the owner of the aids ceased operations in the area and vessel traffic would decrease significantly. The area would then be accessible only to very shallow draft vessels which would be capable of crossing the waterway outside the confines of the presently marked channel. The district's response to the requesting parties also indicated that because the channel was unstable, the proposed project did not conform to its accepted criteria for the establishment of aids to navigation.

We found no prohibition to such a project in the Coast Guard's criteria for the establishment of aids. Basically, this criteria provides for the "safe and economic movement of maritime traffic." Specifically, it provides for the consideration of a number of factors, such as promoting safety, aiding navigation, and serving the needs of commerce. Mariners and other interested parties promoting this project cite these factors as the basis for their request.

We found no evidence, however, in the district's records that a detailed evaluation of such factors as use characteristics, types of operations, and operating environment had been prepared to support its position regarding the anticipated decrease in vessel traffic--a position contrary to that of the mariners and interested parties.

Mariners we contacted cited this project as a continuing and important one. They maintained that the anticipated decrease in vessel traffic never materialized and that, currently, the waterway is used continuously by all types of vessels, including tugs, fishing and pleasure boats, and oil industry service vessels. They further stated that vessels using the waterway without the benefit of aids have run aground.

In view of the above, it appears this matter should be evaluated in detail. As noted, the interested parties promoting this project believe that the volume of marine traffic on the waterway is sufficient justification for the Coast Guard to mark it with aids to navigation. Coast Guard regulations provide for detailed reviews to validate the needs of users and such reviews would serve to

--acquire firm and current data from which a reasonable position may be developed to approve or disapprove the project and

--foster better dialogue between the maritime industry and the Coast Guard.

THE DISTRICT IS NOT PERFORMING
REQUIRED AIDS INSPECTIONS

Although required by district regulations, periodic inspections of aids to assess their suitability to mariners are not being performed. The Coast Guard requires

--Quarterly night runs by units to "visually insure the proper operation and suitability of their aids from the mariner's point of view."

--Annual inspection of 10 percent of all aids in the district. Aids selected for this inspection are to include, in particular, those in remote areas and those that experience high discrepancy rates. This inspection includes a critical evaluation of the aid to determine if it should be discontinued, relocated, or if some other type of aid is needed.

The Coast Guard does not perform quarterly night runs or annually inspect 10 percent of the aids. District officials stated that the field units are familiar with their areas of responsibility and that periodic inspections of aids are unnecessary because mariners usually bring problems to their attention.

IMPROVED COMMUNICATIONS WITH
MARINERS IS NEEDED

Coast Guard regulations recognize the value of contributions from the maritime community in observing and reporting the value of aids to navigation. The regulations require

- cooperation with maritime associations, ship operators, and individuals because of their great help in making improvements to aid systems and
- input from local pilot associations because they are an especially valuable source of information due to their experience.

From discussions with over 50 persons associated with the maritime industry using the waterways of southern Louisiana and who were suggested by the requestors or the Coast Guard, we learned that they are not always informed of district operations in their respective areas and, as a result, the benefits of safer mariner transportation to be gained from the program through mutual cooperation and effort are not being fully realized. The aids program's effectiveness is enhanced through contributions from mariners and every reasonable effort needs to be made to assure that their participation is promoted.

The Chief of the District Operations Division maintained that ample opportunities are available to mariners to express their concerns. He cited examples, such as

- the "Local Notice to Mariners," a newsletter published weekly by the district;
- the availability of Coast Guard personnel in the district and field units to meet with mariners; and
- meetings with pilots and other groups to discuss specific problems.

The "Local Notice to Mariners" is the district's primary means of disseminating information to mariners concerning aids to navigation. It provides information regarding changes in aids and aids systems and may be used to solicit comments from mariners regarding proposed changes. It is mailed each week to approximately 1,000 interested parties in Louisiana.

The weekly notice is not an effective means of communicating because there are many more mariners in Louisiana than those to whom notices are sent. For example, there are over 300,000 boats and vessels in Louisiana. Also, comments regarding proposed changes are not always solicited. We reviewed those notices issued from October 4, 1978, through August 1, 1979. During this 10-month period, the district completed 24 projects involving changes to aids but published advance information on only 8 of the projects. Furthermore, in only four instances did the district solicit comments from mariners regarding proposed changes. We found no evidence that the district received comments on the four proposed changes, and district officials told us that mariners seldom respond to such solicitations. The information provided by the notice related mostly to aid discrepancies and actions taken by the district to correct them and, therefore, did not serve as a useful means to consult with mariners after changes are made.

We discussed with Coast Guard personnel assigned to the tenders and ANT's the subject of communicating with mariners. They stated that they seldom meet with mariners to discuss aids to navigation matters. Although Coast Guard personnel are available to do so, it seems this opportunity for dialogue between mariners and Coast Guard personnel has not been taken advantage of.

District officials do meet with mariners occasionally to discuss aids to navigation matters. However, mariners told us that the meetings were not effective and that a formal system of communications between the parties is essential.

Mariners in southern Louisiana are concerned that the district does not adequately consider their views regarding their navigational needs. They cited the following examples of requests for changes in the aids systems that the district has not approved.

- Aids in the Terrebonne Bay and Timbalier Bay area.
(See p. 4.)
- Lighted buoys at the mouth of the Calcasieu River.
Many mariners believe that the buoys presently on station are too small and that their lights are inadequate, particularly in inclement weather. The problem of buoys being too small has existed for many years. The recent attempt to use lights to compensate for the buoy size has been unsuccessful.
- Range lights in the Calcasieu River. This aid has been ineffective for several years because of smoke and background lighting emanating from a nearby factory. This problem continues although range lights are considered "critical" aids.
- The sea buoy at the southwest pass of the Mississippi River. In 1974 a pilots association asked the district to replace the current sea buoy with a larger aid.

District records showed that detailed evaluations of these proposals were not made although the mariners continued to express a need for them.

During our review we discussed these four examples with 8th district navigation officials, who advised us that

- The request for aids in the Terrebonne Bay and Timbalier Bay area would be reconsidered.
- In view of the information we presented, they would consider the need for large lighted buoys at the mouth of the Calcasieu River.

--They are presently considering moving the range lights in the Calcasieu River to the front of the factory.

--Although they believe that a larger aid at the southwest pass of the Mississippi River is not justified because of the high cost involved, they have received approval from Coast Guard Headquarters to install a high intensity light on the existing buoy.

An example of good communications between the Coast Guard and mariners and the benefits to be derived from a formal procedure for communication was demonstrated during our review. Representatives of a pilots association responsible for navigating vessels on the Mississippi River cited numerous long standing needs for changes in the aids system on the river and at our suggestion agreed to meet with district officials to appraise them of their needs. During this meeting, aids systems needs were discussed in detail and the association agreed to formalize these needs in writing. District representatives agreed to consider the association's suggestions. At the conclusion of the meeting both parties expressed the opinion that periodic meetings to discuss the aids program on the river would be beneficial.

A formal procedure of communications is feasible according to members of the maritime community. They believe an urgent need for such a procedure exists and stated they would give their time and effort to make it function.

In this regard, we noted in our earlier aids to navigation report that the Ports and Waterways Safety Act of 1972, as amended (33 U.S.C. 1221 et seq.), requires the Secretary of Transportation to set up procedures for consulting with and obtaining the views of interested parties in the area of vessel traffic management. While this requirement does not extend to the aids to navigation program, such procedures for consulting with mariners would be equally beneficial to the aids program.

In our prior aids report we recommended that the Coast Guard adopt similar procedures for consulting with and considering mariners views. The Department of Transportation agreed that, generally, communication with mariners is essential to evaluate the adequacy of aids to navigation and to plan, or to confirm and adjust tentative plans, for additions or changes. However, the Department did not agree that formal procedures were necessary. The Department noted that individual mariners' judgments often do not reflect a

broad understanding of the needs of all mariners nor a completely objective balance of risk, economic efficiency, and public interests.

We agree that mariners' complaints may be based on incomplete information. However, if the Coast Guard formally and regularly solicited local mariner views, many of the mariners' concerns would be reduced because they would have complete information.

CONCLUSIONS

As part of its aids to navigation responsibilities, the Coast Guard needs to prepare (1) detailed evaluations of proposed changes and assess their suitability to mariners and (2) periodically inspect existing aids.

Without detailed evaluations, the priority of Coast Guard actions on proposed changes to existing aids and to additional aids cannot be properly determined. Evaluations should consider as a minimum the characteristics of the users, marine operations in the area, and the type of waterways involved. While the Coast Guard should use mariner reports about the aid changes, it should verify the situation through its own inspections and studies.

The Coast Guard is also responsible for periodically inspecting aids to assure they provide the assistance mariners need. Because marine uses vary, the Coast Guard should inspect aids on a regular basis. While mariner input should be considered, it should not be a substitute for Coast Guard inspections.

We continue to support our earlier finding that there is a need for the district to foster better communications and dialogue with mariners in order to improve the aids to navigation program in southern Louisiana.

In order to conform with the objectives of its regulations, the district needs to adopt formal procedures whereby

- the opinions of mariners are periodically solicited and considered,
- district actions regarding approval or disapproval of proposed aids and aids systems are adequately explained to interested parties, and
- mutual cooperation and effort is promoted.

RECOMMENDATIONS

We recommend that the Secretary of Transportation direct the Commandant of the Coast Guard to require the 8th district to:

- Prepare detailed evaluations for the approval or disapproval of proposed changes to navigation aids which consider such factors as waterway use characteristics, types of vessel operations, and the operating environment.
- Periodically inspect aids to navigation as required by Coast Guard regulations.
- Establish a formal program of communication with mariners on navigation problems.

AGENCY COMMENTS AND OUR EVALUATION

The Department of Transportation, in commenting on our draft report (see app. III), did not believe all aids to navigation changes justified the same degree of analysis. The Department said, however, that the Coast Guard will review its existing instructions (procedures) to develop further guidance regarding the extent to which analyses of proposed changes will be processed.

We agree that, in those instances in which the need for a change is obvious, detailed analysis and compliance with the Coast Guard's formal procedures is not necessary. However, these procedures should be followed in other instances and particularly when users' requests for changes are not approved.

The Department, in commenting on the significance of supervisory inspections said that our finding is incomplete and inaccurate. The Department added that the purpose of the requirement is to force second level supervisors to make management reviews of the quality of field maintenance. The Department did recognize, however, that these inspections, as required by the district, are not being performed.

We do not agree that our finding is incomplete or inaccurate. Although we recognize that the field units have other inspection requirements which are being met, we believe the quality control inspections discussed are necessary to insure that the quality of work performed by the field units is adequate. Without such inspections, we do not believe the district can insure that it is conducting and maintaining an aids to navigations program responsive to the needs of the users.

The Department said that the established provisions for communication with the maritime community are satisfactory but in some instances have not been employed as well as they might have been. The Department also said that the Commandant will review these provisions and strengthen them as necessary. We believe the proposed action, when implemented, will be responsive to the intent of our recommendation.

CHAPTER 3

OPPORTUNITIES ARE AVAILABLE TO MORE EFFECTIVELY USE RESOURCES

Although the district has adequate procedures for correcting discrepancies with aids, the response time to make such corrections needs to be improved. Opportunities to reduce the response time are available to the district through more effectively using its resources.

DISCREPANCIES ARE NOT CORRECTED IN A TIMELY MANNER

As noted in our earlier report, the district was not quick to correct discrepancies with navigational aids, such as buoys being off station and having structural deficiencies. These kinds of problems need to be corrected as quickly as possible to minimize risks to mariners and the risk of claims from resulting accidents. The district generally had not been able to meet overall Coast Guard criteria for taking corrective action.

Coast Guard criteria for responding to discrepancies was

- as soon as a discrepancy report is received, for aids categorized as immediate;
- within 24 hours, for aids categorized as priority; and
- within 48 hours, for aids categorized as routine. 1/

In our prior report, we examined 228 discrepancies throughout the 8th district that occurred during July and October 1977 and April 1978. Over 90 percent of these discrepancies were not corrected within the time frame

1/A fourth category provided that unlighted aids in infrequently used waters could go uncorrected until the next maintenance cycle (up to 2 years). Since the district did not categorize its aids into any of the four categories, we could not identify the aids in this fourth category.

allowed--up to 48 hours. Of the 228 discrepancies, 51 were not corrected until at least 30 days had elapsed and 66 were not corrected until at least 60 days had elapsed.

In July 1979 the Coast Guard revised its criteria for responding to problems by eliminating the 24 and 48 hour time constraints. The new criteria provide that:

"The removal of the mandatory time limits should not be considered a relaxation of the requirements for careful evaluation of both the impact of a particular discrepancy on the affected system of aids and the cost of making a rapid response. * * * there are circumstances that clearly require corrective action to be initiated as soon as practicable. Just as clearly, there are circumstances in which response can be delayed reasonably to allow for a more efficient use of resources. The critical requirement is to make informed, intelligent judgments and then to act accordingly on these judgments. While there is no requirement to maintain a high state of readiness for the sole purpose of permitting immediate response to any and all discrepancies, neither can unwarranted delays be tolerated for the mere convenience of service forces."

The above criteria requires an exercise of "judgment" which will now be the predominate factor in taking actions for the correction of discrepancies.

During our current review, we found that the district has done very little to improve its response time to correct discrepancies. For example, we examined 207 discrepancies reported in southern Louisiana from January 3, 1979, to July 25, 1979. As of August 8, 1979, 27 discrepancies, which had been reported from 12 days to over 100 days earlier, remained uncorrected. Of the remaining 180 we found the following:

<u>Number of days to correct</u>	<u>Number of discrepancies</u>
0 - 2	6
3 - 5	18
6 - 30	92
31 - 100	52
over 100	<u>12</u>
Total	<u><u>180</u></u>

Our analysis excluded those aids for which temporary repairs were made.

In our earlier report, we pointed out that the district should categorize each of the aids to assist the operating units in responding to discrepancies in order of their relative importance. Although we noted that certain aids are considered "critical," and subject to immediate corrective actions by either the ANTs or the tenders, the majority of the aids have not been identified as to their relative importance. In view of the revised criteria on responding to problems, we believe there is an increased need for such categorization because the time frames--an apparent and easily defined goal--have been deleted. We also believe that this categorization should be accomplished with full consideration given to the views of the mariners using the aids. Mariner views are important because they have knowledge of the importance of aids and are ultimately affected by changes to the system.

We found that the district's supply of materials and manpower employed in the aids to navigation program was generally adequate to correct problems with aids and that depot operations are adequate. (See app. II for a further discussion.) Also, we found that the district's procedures requiring that discrepancies be corrected quickly are adequate but have not been fully implemented. The ANTs are strategically located throughout southern Louisiana and, as a result, have been very effective in correcting discrepancies--usually corrective action is taken on the same day notice of the discrepancy is received. However, faster response is needed for aid discrepancies which require the tenders.

The problem of delayed responses continues because the district

--has not categorized aids,

--has a limited number of tenders for maintaining aids systems and has not recently evaluated the appropriateness of their homeports, and

--has not considered using contractors to assist in correcting discrepancies.

Tender homeports

As noted in appendix I, the homeports for the district's tenders which service Louisiana waters are Galveston, Texas;

New Orleans, Louisiana; and Mobile, Alabama. Their share of the workload is dispersed over many miles of inland and coastal waterways.

The district's tenders have been stationed at the homeports for many years--the exact length of time is unknown. Although marine activity has increased significantly in parts of southern Louisiana over the past few years, the district has not made any reevaluations in recent years regarding the appropriateness of these homeports. For example, increases in vessel traffic in the Calcasieu River and the Houma Navigational Canal which lead into the Gulf Coast are shown below.

<u>Waterway</u>	<u>Vessel traffic</u>		<u>Percent of increase</u>
	<u>1968</u>	<u>1977</u>	
Calcasieu River	16,167	33,054	104
Houma Navigation Canal	12,406	23,836	92

Tenders servicing aids in the Calcasieu River are located at Galveston, and those servicing aids in the Houma Navigation Canal are located at New Orleans. Transit time between Galveston and the Calcasieu River is about 19 hours and about 11 hours between New Orleans and the Houma Navigation Canal. Transit time between these locations is substantial and the opportunity to reduce it could promote more effective service to aids in those areas. From this standpoint alone, the 8th district needs to determine if alternative locations would be more appropriate for tender homeports.

Use of contractors

Throughout the principal waterways of southern Louisiana, many contractors with the capability of performing aids to navigation work are available to assist the Coast Guard. Acquiring their services on an "as needed" basis would

- promote more timely response to discrepancies with aids and
- enhance the ability of tenders to schedule and accomplish repairs and maintenance of aids systems in a more orderly manner.

Furthermore, because of its limited resources, contracting for aids servicing would greatly assist the

district in coping with extraordinary losses and damages to aids systems resulting from catastrophic events such as hurricanes.

The Corps of Engineers, for example, often uses contractors in its maritime activities (e.g., surveys of waterways and engine repairs) in southern Louisiana. This is done when the Corps is unable to meet excessive demands with in-house capabilities.

CONCLUSION

The Coast Guard has not categorized its aids to assist its operating units in responding to aid discrepancies. As a result, discrepancies which should be corrected in a timely manner are not. We recognize that all aids do not have the same significance to safe marine transportation but without some categorization, operating units have not been given guidance as to which aids require immediate attention.

The Coast Guard also needs to determine if the homeports of its tenders are appropriate and whether the use of contractors could improve its response time. The tender homeports have not been evaluated in recent years and marine traffic activity has changed; therefore, tender relocation may improve the units operating efficiency. Also, contractors could help the Coast Guard respond quickly to discrepancies with aids.

RECOMMENDATIONS

We recommend that the Secretary of Transportation direct the Commandant of the Coast Guard to require the 8th district to:

- Rank aids to navigation as to importance to safe marine transportation to assist operating units in responding to reported discrepancies in order of relative importance.
- Evaluate the appropriateness of the homeports of its tenders.
- Explore the feasibility of using contractors to correct discrepancies with aids to navigation when district units and personnel cannot respond in a reasonable period of time.

AGENCY COMMENTS AND OUR EVALUATION

In responding to our draft report (see app. III) the Department pointed out that the matter of assigning priorities to aids had been studied extensively by the Coast Guard. These studies recognize that many variables need to be considered in the decision process regarding response actions to discrepancies. The Department said that the Coast Guard's process is fundamentally sound, however, the Commandant will examine the process and, if necessary, modify it to assure that responses to discrepancies are appropriate.

The Department commented further regarding the draft report's reference to the number of days it took the Coast Guard to correct discrepancies. Specifically, the Department takes issue with the fact that the discrepancies were not described in detail which would permit an analysis of their relative importance. Also, the Department believes our report, as well as our preceding report, did not give the Coast Guard credit for temporary repairs to aids.

With respect to the issue regarding descriptive data for the discrepancies reported, we cannot agree that this data would permit an analysis of their relative importance, because, as noted earlier, the Coast Guard has neither established a system of priorities for the correction of discrepancies nor classified aids in order of their relative importance.

The Department's opinion that our reports did not give the Coast Guard credit for temporary repairs to aids is not valid. In both reports, the statistics reflecting the numbers of discrepancies and the time required to correct them include only those for which no corrective action, temporary or otherwise, was taken.

While we recognize the Department's views differ from ours with respect to the need to prioritize aids and aids systems, the intent of the proposed Coast Guard action to examine the process is responsive to our proposal.

The Department said that it believes the Coast Guard has identified the most appropriate homeports for its tenders and that proper consideration has been given to those factors (such as shoreside support and crew considerations) bearing upon the proper selection of homeports. The Department believes the Coast Guard has chosen homeports for its tenders in the district which provide a suitable distribution of forces.

We do not agree with the Department because many years have elapsed since the district evaluated the appropriateness of its tender homeports and, maritime activity has increased significantly in recent years in southern Louisiana. We believe, therefore, the district needs to prepare a current evaluation to determine whether the present tender homeports are the most appropriate.

The Department agreed that the Coast Guard could make greater use of contractors. The Department said that private contractors are used often in the aids to navigation program where the Coast Guard has insufficient in-house capabilities, but that some problems were experienced in obtaining the services of contractors. In response to our recommendation, however, the Commandant will reopen the issue and explore possibilities of further use of contractors. We believe that this action will be responsive to our recommendation.



PRINCIPAL BOATS/VESSELS USED BY THE 8TH DISTRICT
IN ITS AIDS TO NAVIGATION PROGRAM IN SOUTHERN LOUISIANA

<u>Name of boat/vessel</u>	<u>Type of boat/vessel</u>	<u>Permanent station</u>	<u>Length</u>	<u>Beam</u>	<u>Draft</u>	<u>Maximum range</u>	<u>Economical speed</u>	<u>Maximum speed</u>	<u>Boom capacity</u>	<u>Berthing</u>	<u>Operational control</u>
			-----feet-----			(miles)	----(knots)----		(tons)		
Blackthorn (note a)	Buoy tender	Galveston, Tex.	180	37	13	13,500	7.5	13.0	20	yes	District
Salvia	Buoy tender	Mobile, Ala.	180	37	13	13,500	7.5	13.0	20	yes	District
White Holly Clamp	Buoy tender	New Orleans, La.	133	31	9	4,500	5.1	9.8	10	yes	District
	Construction tender	Galveston, Tex.	76	22	4	2,500	5.0	9.4	9	yes	Group Galveston
Hatchet	Construction tender	Galveston, Tex.	76	22	4	2,500	5.0	9.4	9	yes	Group Galveston
Wedge	Construction tender	New Orleans, La.	76	22	4	2,500	5.0	9.4	9	yes	Group New Orleans
Pamlico	Construction tender	New Orleans, La.	160	30	4	22,000	5.1	10.0	9	yes	Group New Orleans
(Note b)	Aids to navigation boat	(c)	58.75	16.83	5	420	NA	25.0	1/2	yes	Group New Orleans
(Note b)	Aids to navigation boat	Sabine, Tex.	58.75	16.83	5	420		25.0	1/2	yes	Group Galveston
	Crew boat	Venice, La.	53.33	15.33	5	200	18.0	22.0	-	yes	Group New Orleans
(Note b)	Utility boat	Dulac, La.	45.13	13.75	3.67	195	5.0	7.0	2	no	Group Grand Isle
(Note b)	Utility boat	Berwick, La.	40	13.96	3.2	380	6.2	6.2	2	no	Group Grand Isle
(Note b)	Trailable aids to navigation boat	(d)	21	7.5	2.5	NA	NA	NA	NA	no	Group New Orleans

a/This vessel sank subsequent to our review.

b/Boats do not have names.

c/No permanent station.

d/ANTS Berwick, Dulac, Sabine, and New Orleans each has one of these buoy boats which is capable of speeds of about 25 to 27 knots.



IMPACT OF DEPOT CONSOLIDATIONSON TENDER OPERATIONS

The 8th Coast Guard district operates depots for the aids to navigation program at Corpus Christi, Texas; Galveston, Texas; New Orleans, Louisiana; and Mobile, Alabama.

These depots serve as inventory points for aids equipment and materials and also perform minor buoy maintenance work. Major buoy maintenance, including sandblasting and painting, is done at Galveston and Mobile.

The New Orleans depot performed sandblasting and painting repairs to buoys until 1974 at which time these services were phased out and transferred to the Mobile depot. The consolidation of these operations was done to avoid building a pollution-free facility at the New Orleans depot which would have cost an estimated \$130,000.

We reviewed the effects the consolidation at Mobile and Galveston may have had on tender operations in the aids to navigation program. We found no evidence of any adverse effects. We found that shipments of buoys from New Orleans to Mobile for repairs and subsequent return to New Orleans can be accomplished in a timely manner. We also found no evidence that tenders were delayed as a result of the consolidation.



OFFICE OF THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

February 25, 1980

ASSISTANT SECRETARY
FOR ADMINISTRATION

Mr. Henry Eschwege
 Director, Community and Economic
 Development Division
 U.S. General Accounting Office
 Washington, D.C. 20548

Dear Mr. Eschwege:

We have enclosed two copies of the Department of Transportation's (DOT) reply to the General Accounting Office (GAO) draft report, "Coast Guard Action Needed For A More Effective Aids To Navigation Program Along The Louisiana Gulf Coast."

The GAO concludes that the Eighth Coast Guard District needs to improve its management of the aids to navigation program by preparing detailed evaluations of the propriety of proposed changes in aids. We do not believe all changes justify the same degree of analysis. However, the Coast Guard will review the existing guidance in the Aids to Navigation Manual. The objective will be to develop a preliminary assessment process which will account for and document the varying complexity and impact of aid changes, leading to a decision on whether further and more detailed analysis is necessary.

The GAO finding that required inspections of aid systems are not being performed is misdirected and results from a misunderstanding of the cited requirement. The Department disagrees with this finding on the basis that it is incomplete and inaccurate.

GAO maintains that the Coast Guard has not established a formal communications system with mariners to seek opinions on navigation problems. The Department believes the established provisions for communication between the Coast Guard and the maritime community are satisfactory, but recognizes in certain instances this system has not been employed as well as it might have been. The Commandant of the Coast Guard will review existing policy and guidance on communication with users and will strengthen the requirements as necessary.

If we can assist you further, please let us know.

Sincerely,


 Edward W. Scott, Jr.



It's a law we
can live with.

Enclosures

DEPARTMENT OF TRANSPORTATION REPLY
TO
GAO DRAFT REPORT
ON
COAST GUARD ACTION NEEDED FOR A MORE
EFFECTIVE AIDS TO NAVIGATION PROGRAM
ALONG THE LOUISIANA GULF COAST
SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

GAO observes that the Coast Guard does not prepare detailed evaluations of the propriety of proposed changes to existing aids and the needs for additional aids. GAO finds that the Coast Guard does not periodically inspect aids to insure their suitability. GAO maintains that the Coast Guard has not established a formal communications system with mariners to seek opinions on navigation problems. GAO finds that the Coast Guard has not always made timely corrections to discrepancies because aids have not been prioritized in terms of their importance to safe marine transportation. GAO finds that the Coast Guard has not recently evaluated the appropriateness of the location of its tenders. GAO finds that the Coast Guard has not explored the use of alternative means for correcting problems, such as private contractors.

GAO recommends that the Commandant of the Coast Guard direct the Eighth District to prepare detailed evaluations for the approval or disapproval of proposed changes to navigation aids which consider such factors as waterway use characteristics, type of vessel operations, and the operating environment; periodically inspect aids to navigation as required by Coast Guard regulations; establish a formal program of communication with mariners on navigation problems; prioritize aids to navigation as to importance to safe marine transportation to assist operating units in responding to problems in order of relative importance; evaluate the appropriateness of the locations of its tenders; and explore the feasibility of the use of contractors to correct discrepancies when district units and personnel cannot respond in a reasonable period of time.

Position Statement:

The Department objects to the use throughout the draft GAO report of the terminology, "Coast Guard regulations" and "regulations" when referring to internal management guidance. Since this usage may cause confusion with those portions of the Code of Federal Regulations applicable to the Coast Guard, it could leave the reader with the impression that the Coast Guard is failing to comply with the direction of authority external to and higher than the Coast Guard. It would be more accurate and less confusing to cite the specific applicable document.

The GAO finds that "The district needs to improve its management of the (aids to navigation) program by -- preparing detailed evaluations for the approval or disapproval of proposed changes in aids..." The Department concurs that, in all cases, detailed evaluations of aid changes are not prepared, but it does not believe that all changes justify the same degree of analysis. The Coast Guard will review the existing guidance in Chapter 3, Vol I of the Aids to Navigation Manual for the establishment, review and modification of aid systems. Its

objective will be to develop a preliminary assessment process which will account for and document the varying complexity and impact of aid changes, leading to a decision on whether further, more detailed analysis is necessary.

The GAO finding that required inspections of aid systems are not being performed is misdirected and results from a misunderstanding of the cited requirement. It is true that the provisions of the Eighth Coast Guard District Operation Plan, Annex K, Appendix I, paragraph 6b, are not being followed. What is not discussed, however, is that those provisions are not for the purpose of preventive maintenance and are of secondary importance to other "inspection" requirements which exist. Annex B of the Coast Guard Aids to Navigation Manual, Vol I, defines "inspection" in detail and specifies the required frequency for each type of navigational aid. These inspections are for purposes of preventive maintenance and their requirements have been and are being met by the Eighth District. The requirements imposed by Annex K of the District Operation Plan are designed to be a method of forcing second-level supervisors to give direct management overview to the quality of field maintenance. A failure to perform this "quality control" on 10 percent of the Districts' aids has little, if any, effect on the user of the aid system and is not a fault of major significance in the management of the aids to navigation system in the Eighth Coast Guard District. The Department rejects this finding as incomplete and inaccurate.

The Department believes the established provisions for communication between the Coast Guard and the maritime community are satisfactory, but recognizes in certain instances this system has not been employed as well as it might have been. The Commandant of the Coast Guard will review existing policy and guidance on communication with users and will strengthen the requirements as necessary.

The GAO finds that aid discrepancies are not corrected in a timely manner, and proposes as the reason the failure of the Coast Guard to prioritize its aids. The Department acknowledges that the criteria in Section A-3 of the Coast Guard Aids to Navigation Manual, Vol. I, may not form, standing alone, the sole basis on which to decide the correct response to a discrepancy. The Coast Guard has reviewed extensively the question of how best to establish a decision-making process for discrepancy response. Appendix A of the Aids to Navigation Manual, read in its entirety, is intended to guide Coast Guard field commanders as they give appropriate weight to the many factors which must be considered in such a decision. As noted in Section A-2, the Coast Guard has considered and rejected elaborate decision tables as a means of integrating the many variables which affect the correct response to a particular discrepancy; such tables it believes would be far too cumbersome and complex to be useful. What the Coast Guard has done in Appendix A is establish a mechanism which in essence does what the GAO proposes, but on a case-by-case basis. Thus, those who must make a response decision through this process establish for the operative circumstances the importance of both the aid and the discrepancy, individually and in relation to the local system of aids and those who use it. The Department believes this process is fundamentally sound. However, in view of the two findings by the GAO in successive reports, the Commandant will examine the entire process and, if necessary, modify it to assure that responses to aid discrepancies are appropriate.

The GAO also offers in support of its finding data which attempts to correlate a number of discrepancies with the number of days to correct. It does this, however, without any qualification of the discrepancies. The data shows superficially that of 180 discrepancies that occurred between January 3 and July 25, 1979, 156 required more than 5 days to correct. Of the 156, 92 were corrected within 6 to 30 days, 52 within 31 to 100 days and 12 required more than 100 days. While these figures appear to give support to the GAO's allegation, significant facts have been omitted. First, the lack of information about the nature of the discrepancies precludes any analysis of their relative importance. Second, GAO does not show that the majority of the discrepancies were destroyed aid structures which were marked temporarily by a buoy. In this and its previous analyses of the Short Range Aids to Navigation Program, the GAO has refused steadfastly to recognize the validity of the Coast Guard practice of temporarily marking destroyed structures and proceeding with their rebuilding in an orderly and efficient manner. The Department believes this position weakens the credibility of the report.

The Department rejects the GAO finding that the Coast Guard has not identified the most appropriate homeports for its tenders. Clearly, there are constraining factors which limit the options, but every effort has been made to balance the aid servicing and vessel support requirements. The availability of appropriate shoreside support for the vessel, its crew members and their families in many cases may be dominating considerations in such a decision. The Department believes the Coast Guard has given proper weight to these factors and has chosen locations for its tenders in the Eighth District which provide a suitable distribution of forces.

Private contractors are used often to build and rebuild aid structures in many areas where the Coast Guard has insufficient in-house capability. However, delays in obtaining a contractor's services at an acceptable price often make this method unsuitable for performing work requiring a rapid response. On a number of occasions the Coast Guard has explored, unsuccessfully, the possibility of entering into term contracts which would require the contractor to respond "on call" to aids to navigation requirements. The Commandant will reopen the issue, however, in response to the GAO recommendation, to explore the possibilities of further use of contracts to extend the Coast Guard's aids to navigation maintenance capability.

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